

C L A I M S

1. A pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.
2. A pre-impregnated material according to claim 1 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness.
3. A pre-impregnated material according to claim 1 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness along its width.
4. A pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin has an impregnation depth of at least 60% of the thickness of said textile substrate.
5. A pre-impregnated material according to claim 4 and wherein said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.
6. A pre-impregnated material according to claim 4 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness.
7. A pre-impregnated material according to claim 4 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness along its width.

8. A pre-impregnated material according to claim 1 and wherein said resin has an impregnation depth of at least 80% of the thickness of said textile substrate.
9. A pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin has a thickness exceeding 300 microns.
10. A pre-impregnated material according to claim 9 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness.
11. A pre-impregnated material according to claim 9 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness along its width.
12. A pre-impregnated material according to claim 9 and wherein said resin has an impregnation depth of at least 60% of the thickness of said textile substrate.
13. A pre-impregnated material according to claim 12 and wherein said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.
14. A pre-impregnated material according to claim 12 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness.
15. A pre-impregnated material according to claim 9 and wherein said resin has an impregnation depth of at least 80% of the thickness of said textile substrate.
16. A pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,

said pre-impregnated material being characterized in that the weight of said resin is at least 70% of the weight of said pre-impregnated material.

17. A pre-impregnated material according to claim 16 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness.

18. A pre-impregnated material according to claim 17 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness along its width.

19. A pre-impregnated material according to claim 16 and wherein said resin has an impregnation depth of at least 60% of the thickness of said textile substrate.

20. A pre-impregnated material according to claim 19 and wherein said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.

21. A pre-impregnated material according to claim 19 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness.

22. A pre-impregnated material according to claim 19 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness along its width.

23. A pre-impregnated material according to claim 16 and wherein said resin has an impregnation depth of at least 80% of the thickness of said textile substrate.

24. A pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin has a thickness less than 50 microns.

25. A pre-impregnated material according to claim 24 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness.
26. A pre-impregnated material according to claim 25 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness along its width.
27. A pre-impregnated material according to claim 24 and wherein said resin has an impregnation depth of at least 60% of the thickness of said textile substrate.
28. A pre-impregnated material according to claim 27 and wherein said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.
29. A pre-impregnated material according to claim 27 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness.
30. A pre-impregnated material according to claim 27 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness along its width.
31. A pre-impregnated material according to claim 24 and wherein said resin has an impregnation depth of at least 80% of the thickness of said textile substrate.
32. A pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that the weight of said resin is less than 10% of the weight of said pre-impregnated material.
33. A pre-impregnated material according to claim 32 and wherein the weight of said resin is less than 5% of the weight of said pre-impregnated material.

34. A pre-impregnated material according to claim 32 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness.
35. A pre-impregnated material according to claim 32 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness along its width.
36. A pre-impregnated material according to claim 32 and wherein said resin has an impregnation depth of at least 60% of the thickness of said textile substrate.
37. A pre-impregnated material according to claim 36 and wherein said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.
38. A pre-impregnated material according to claim 32 and wherein said resin has an impregnation depth of at least 80% of the thickness of said textile substrate.
39. A pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin includes particles having a size spectrum which extends over at least two orders of magnitude.
40. A pre-impregnated material according to claim 39 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness.
41. A pre-impregnated material according to claim 40 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness along its width.
42. A pre-impregnated material according to claim 39 and wherein said resin has an impregnation depth of at least 60% of the thickness of said textile substrate.

43. A pre-impregnated material according to claim 42 and wherein said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.
44. A pre-impregnated material according to claim 42 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness.
45. A pre-impregnated material according to claim 42 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness along its width.
46. A pre-impregnated material according to claim 39 and wherein said resin has an impregnation depth of at least 80% of the thickness of said textile substrate.
47. A pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin includes particles having a density spectrum which extends over at least one order of magnitude.
48. A pre-impregnated material according to claim 47 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness.
49. A pre-impregnated material according to claim 47 and wherein said resin has a uniformity of thickness having a variation of less than 2% of its average thickness along its width.
50. A pre-impregnated material according to claim 47 and wherein said resin has an impregnation depth of at least 60% of the thickness of said textile substrate.

51. A pre-impregnated material according to claim 50 and wherein said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.
52. A pre-impregnated material according to claim 51 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness.
53. A pre-impregnated material according to claim 50 and wherein said resin has a uniformity of thickness having a variation less than 2% of its average thickness along its width.
54. A pre-impregnated material according to claim 47 and wherein said resin has an impregnation depth of at least 80% of the thickness of said textile substrate.
55. A pre-impregnated material according to claim 1 and wherein said resin is fully melted.
56. A pre-impregnated material according to claim 1 and wherein said resin is partially melted and partially in particulate form.
57. A pre-impregnated material according to claim 1 and wherein said resin is formed as a plurality of resin layers.
58. A pre-impregnated material according to claim 1 and wherein said resin is formed as a plurality of resin layers having different thicknesses.
59. A pre-impregnated material according to claim 1 and wherein said resin is formed as a plurality of resin layers formed of different resin materials.
60. A pre-impregnated material according to claim 9 and wherein said resin is fully melted.

61. A pre-impregnated material according to claim 9 and wherein said resin is partially melted and partially in particulate form.
62. A pre-impregnated material according to claim 9 and wherein said resin is formed as a plurality of resin layers.
63. A pre-impregnated material according to claim 9 and wherein said resin is formed as a plurality of resin layers having different thicknesses.
64. A pre-impregnated material according to claim 9 and wherein said resin is formed as a plurality of resin layers formed of different resin materials.
65. A pre-impregnated material according to claim 16 and wherein said resin is fully melted.
66. A pre-impregnated material according to claim 16 and wherein said resin is partially melted and partially in particulate form.
67. A pre-impregnated material according to claim 16 and wherein said resin is formed as a plurality of resin layers.
68. A pre-impregnated material according to claim 16 and wherein said resin is formed as a plurality of resin layers having different thicknesses.
69. A pre-impregnated material according to claim 16 and wherein said resin is formed as a plurality of resin layers formed of different resin materials.
70. A pre-impregnated material according to claim 24 and wherein said resin is fully melted.
71. A pre-impregnated material according to claim 24 and wherein said resin is partially melted and partially in particulate form.

72. A pre-impregnated material according to claim 24 and wherein said resin is formed as a plurality of resin layers.
73. A pre-impregnated material according to claim 24 and wherein said resin is formed as a plurality of resin layers having different thicknesses.
74. A pre-impregnated material according to claim 24 and wherein said resin is formed as a plurality of resin layers formed of different resin materials.
75. A pre-impregnated material according to claim 32 and wherein said resin is fully melted.
76. A pre-impregnated material according to claim 32 and wherein said resin is partially melted and partially in particulate form.
77. A pre-impregnated material according to claim 32 and wherein said resin is formed as a plurality of resin layers.
78. A pre-impregnated material according to claim 32 and wherein said resin is formed as a plurality of resin layers having different thicknesses.
79. A pre-impregnated material according to claim 32 and wherein said resin is formed as a plurality of resin layers formed of different resin materials.
80. A pre-impregnated material according to claim 39 and wherein said resin is fully melted.
81. A pre-impregnated material according to claim 39 and wherein said resin is partially melted and partially in particulate form.

82. A pre-impregnated material according to claim 39 and wherein said resin is formed as a plurality of resin layers.

83. A pre-impregnated material according to claim 39 and wherein said resin is formed as a plurality of resin layers having different thicknesses.

84. A pre-impregnated material according to claim 39 and wherein said resin is formed as a plurality of resin layers formed of different resin materials.

85. A laminate formed of a plurality of layers of pre-impregnated material, at least one of said plurality of layers of pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin has a uniformity of thickness having a variation of less than 5% of its average thickness.

86. A laminate formed of a plurality of layers of pre-impregnated material, at least one of said plurality of layers of pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin has a thickness exceeding 300 microns.

87. A laminate formed of a plurality of layers of pre-impregnated material, at least one of said plurality of layers of pre-impregnated material comprising:
a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that the weight of said resin is at least 70% of the weight of said pre-impregnated material.

88. A laminate formed of a plurality of layers of pre-impregnated material, at least one of said plurality of layers of pre-impregnated material comprising:

a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin has a
thickness less than 50 microns.

89. A laminate formed of a plurality of layers of pre-impregnated material, at
least one of said plurality of layers of pre-impregnated material comprising:

a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that the weight of
said resin is less than 10% of the weight of said pre-impregnated material.

90. A laminate formed of a plurality of layers of pre-impregnated material, at
least one of said plurality of layers of pre-impregnated material comprising:

a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin
includes particles having a size spectrum which extends over at least two orders of
magnitude.

91. A laminate formed of a plurality of layers of pre-impregnated material, at
least one of said plurality of layers of pre-impregnated material comprising:

a textile substrate; and
resin adhered to said textile substrate,
said pre-impregnated material being characterized in that said resin
includes particles having a density spectrum which extends over at least one order of
magnitude.